

CLAIMS

1. Inhaler (1) for powdery, in particular medical substances (10), with a suction air channel (12) leading to a mouthpiece (3), also a storage chamber (11) for the substance (10) and a linearly moving dosing chamber (26) for apportioning a specific amount of substance from the storage chamber (11) into the region of a transfer point (Ü) to the suction air stream (S), characterized in that a component of the suction air stream (S) that lies in the direction in which the dosing chamber (26) extends empties the dosing chamber (26).
15
2. Inhaler according to Claim 1 or in particular according thereto, characterized in that the dosing chamber (26) is configured as a transverse bore of a spindle (25) which can be displaced in dependence on a closure cap.
20
3. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized by a conical transverse bore.
25
4. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that an air passage (40) adjoining the suction air stream (S) is associated with the dosing chamber (26).
30
5. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that an air passage (40) is respectively provided upstream of each of the two openings of the dosing chamber (26).
35
6. Inhaler according to one or more of the preceding claims or in particular according thereto,

5 characterized in that associated with the larger clear diameter end of the dosing chamber (26) is an air passage (40) of a smaller diameter than it and associated with the smaller clear diameter end is an air passage (40) of a larger diameter than it.

10 7. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the air passages (40) are formed on a cup-shaped rotary part (22) guiding the spindle (25) and are in flow communication with air inlets (42) in the lateral wall (37) of the mouthpiece (3).

15 8. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the air passages (40) are disposed axially offset in relation to the air inlets (42) lying closer to the mouthpiece (3).

20 9. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the rotary part (22) forms with its cup base the top (23) of the storage chamber (11), the center of which has a guiding opening (24) for the spindle (25) acting as a plunger slide.

25 10. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the spindle (25), which is pointed at the end in the plunging direction in the manner of a screwdriver blade, is rotationally connected to the rotary part (22) by means of radial fins (33).

30 35 11. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the cup wall (35) of the cup-

shaped rotary part (22) has axial guiding slots (34) in which the fins (33) are guided.

12. Inhaler according to one or more of the preceding
5 claims or in particular according thereto,
characterized by an extension limiting stop (36) of
the spindle (25) that is provided by the mouthpiece
(3), defining the ready-to-empty position of the
dosing chamber (26), which with its base wall
10 portion provides the transfer point (Ü).
13. Inhaler according to one or more of the preceding
claims or in particular according thereto,
characterized by a docking point (28) between the
15 spindle (25) and the closure cap (4) that lies on
the mouthpiece side and disengages if overloaded.
14. Inhaler according to one or more of the preceding
claims or in particular according thereto,
20 characterized in that the rotary part (22) has a
rotor (R) with which a stator (St) is associated,
with a scooping effect acting so as to carry
substance into the dosing chamber (26) when the
rotary part (22) is reversed in its rotation.
- 25
15. Inhaler according to one or more of the preceding
claims or in particular according thereto,
characterized by web-carried rotor blades (47)
extending from an annular disk (49) of the base of
30 the rotary part (22).
16. Inhaler according to one or more of the preceding
claims or in particular according thereto,
characterized in that the rotor blades (47) have a
35 sickle-shaped outline.
17. Inhaler according to one or more of the preceding
claims or in particular according thereto,

characterized by two rotor blades (47) lying opposite each other.

18. Inhaler according to one or more of the preceding
5 claims or in particular according thereto,
characterized in that the rotor blades (47) extend
substantially on a quarter sector, with a flank
(50) directed radially toward the center of the
spindle (25) and a blade flank (51) lying
10 approximately at right angles thereto in tangential
alignment with the spindle (25) in such a way as to
leave a gap.
19. Inhaler according to one or more of the preceding
15 claims or in particular according thereto,
characterized in that the flanks (50) lie in a
common diametral line (y-y).
20. Inhaler according to one or more of the preceding
20 claims or in particular according thereto,
characterized in that the rotor (R) engages under
the stator (St) in such a way that the stator (St)
is formed as a projection protruding radially
25 inward from the inside wall of the storage chamber
(11) and extending freely into a rotational path
(54) of the rotor (R).
21. Inhaler according to one or more of the preceding
30 claims or in particular according thereto,
characterized in that the stator (St) has a
trapezoidal outline with a base in the inside wall
of the storage chamber (11).
22. Inhaler according to one or more of the preceding
35 claims or in particular according thereto,
characterized in that the rotational path (54) is
axially limited by the underside of the annular
disk (49) of the rotary part (22) and the inner
side of the rotor blades (47) facing it.

23. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the stator (St) lies in outline beneath the quarter sector, leaving an interspace (55) between two rotor blades (47).

5

24. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the guiding opening (24) within the rotary part (22) is lined by a sealing bush (56) enclosing the cylindrical portion of the spindle (25).

10

15 25. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized by a sealing ring (58) inserted with preloading between the inside wall of the storage chamber (11) and the rotary part (22).

20

26. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the sealing ring (58) is snap-fitted in annular grooves (59, 60) of both parts, the annular groove (59) located on the rotary part (22) taking the form of a V-shaped notched groove and the annular groove (60) of the storage chamber (11), lying at the same height as said notched groove, being of a semicircular form.

25

30

27. Inhaler according to one or more of the preceding claims or in particular according thereto, characterized in that the closure cap (4) is formed as a screw cap and interacts with the mouthpiece (3) via co-rotating means (45/46).

35